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Smoking Cessation in School Children in the Federation of Bosnia and Herzegovina

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ABSTRACT

Introduction: Quitting tobacco use has many benefits for both individuals and society. For individuals, quitting of smoking provides immediate and long-term benefits to health. Higher levels of nicotine addiction and start smoking at a younger age are factors consider as strongly influence on quit smoking. Access to youth friendly quit lines increases a smoking cessation of school children. **Goal:** Monitoring of trends of age of initiation of smoking and current smoking cigarettes as good motivation for smoking cessation among school children in the Federation of BiH. **Methods:** Analysis of survey's findings performed in the Federation of BiH in period 2008-2013, with particular focus on indicators of every smokers, currents smokers, start to smoke before age of ten, signs of smoking dependence and motivation for quitting smoking in school children. Surveys involves two-stage cluster sample design aimed to enroll students in grades 7, 8 and 9th of primary and 1th grade of secondary school. **Results:** A survey findings indicates ever cigarettes smokers decreases from 45.9% in 2008 to 43.2% in 2013, as well decreases of current cigarette smoking from 14.3% in 2008 to 12.7% in 2013, both boys and girls. However, survey data shows decrease of current smoking students who want to stop smoking now from 50.5% in 2008 to 45.8% in 2013. **Conclusions:** Collected data confirmed decreases of current cigarette smoking in school children in the Federation of BiH in period 2008-2013. Access to available smoking cessation services and quit lines for school children and youth considers should be a significant part of tobacco control measure in the Federation of BiH.

Key words: smoking, cessation, school children, Federation of BiH.

1. INTRODUCTION

Smoking cessation requires commitment shared by individuals and national authorities. Along with an individual approach, a supportive environment is needed to encourage tobacco consumers in their attempts to quit (1).

According to WHO data, about 87% of countries in the World Health Organization (WHO) European Region allow nicotine replacement therapies (NRT) to be sold, but only about 40% offer toll-free quit lines. (2) The evidence shows that a pharmaceutical treatment (NRT and/or bupropion) approximately doubles success rates of smoking cessation. Nevertheless, only three countries fully cover and four partially cover the cost of NRTs through national/federal health insurance or the national health service (3,4,5).

Recent surveys reveal great opportunity for smoking cessation among both young people as well in adults. Survey findings in over 30 countries in the WHO European Region shows that about 7 out of 10 smokers aged 13–15 years expressed interest in quitting smoking. Disadvantaged people are likely to start smoking at a younger age and have less access to cessation services. Recent study of 10 partner countries in the European Union shows, the development of smoking-cessation interventions for young people has been neglected (6,7,8,9,10).

2. GOAL

Analysis of current cigarette smoking and attitude of school children related to smoking cessation, as a significant indicator for recommendations of tobacco control policy and strategy measures in the Federation of BiH.

3. MATERIAL AND METHODS

The analysis involves data collected through two surveys conducted in the Federation of BiH, during period 2008–2013 under support of the Federal Ministry of Health and Federal Ministry of Education who authorized the survey. Survey is conducted by the Institute for Public Health of the Federation of BiH as the implementing agency (11).

For the analysis purpose, current cigarette smoking and motivation for cessation in school children assessed as a part of multiple-choice questionnaire adapted from a Global youth tobacco standard core questionnaire. Surveys involves two-stage cluster sample design aimed to enroll students in grades 7, 8 and 9th of primary and 1st grade of secondary school, with focus on representative sample of children age 13–15. In 2013, from 6,972-sampled school children, total 6,415 completed usable questionnaires, of which 5,060 were aged 13–15 years with overall response rate of schoolchildren 92.0%.

Data entry and statistical analysis completed with SU-

DAAN, a software package used to calculate weighted prevalence estimates and standard errors (SE) of the estimates (95% confidence intervals [CI] were calculated from the SEs) (11,12).

4. RESULTS

Data analysis is based on comparative trends of selected indicators collected through two surveys performed in the Federation of Bosnia and Herzegovina in 2008 and 2013. Every cigarettes smokers decreases from 45.9% in 2008 to 43.2% in 2013, both in boys from 52.9% to 47.8% in 2013 as well in girls from 39.0% in 2008 to 38.3% in 2013. A survey data shows that overall current cigarette smokers in school children decreased from 14.3% in 2008 to 12.7% in 2013, both boys and girls (Table 1).

A survey data indicate early initiation of smoking among school children in the Federation of BiH, with some changes in period 2008-2013. A over third of school children (36.6%) in 2008 who initiated to smoke in age before ten, decreases to 32.8% in 2013, both in boys from 41.3% in 2008 to 34.3% in 2013 as well in girls from 30.9% in 2008 to 28.9% in 2013

A percentage of never smokers in school children who are thinking about possible initiation to start smoking in near future are important data for susceptibility of tobacco use among youth. A survey findings show that never tobacco users susceptible to tobacco use in the future decrease from 26.1% in 2008 to 12.3% in 2013 both in boys decreases from 27.1% in 2008 to 11.5% in 2013 as well in girls from 12.3% in 2008 to 12.9% in 2013 (Figure 2)

From two third or 68.1% school children in 2008 who confirmed that tried to stop smoking in the past 12 months, over half of school children or 57.7% in 2013 confirmed attempting to stop smoking. A survey data shows decrease of current smoking students who want to stop smoking now from 50.5% in 2008 to 45.8% in 2013, more likely boys than girls. From over half or 53.2% of school children in 2008 who thought they would be able to stop smoking if they wanted to, significantly increases to 80.3% of school children in 2013. However, slightly 1 in 10 school children or 12.3% in 2013 have ever received help/advice from a program or professional to stop smoking (Table 2).

5. DISCUSSION

Survey findings collected a significant data for monitoring of tobacco as health risk factor in school children and youth in the Federation of BiH. Every cigarettes smoker's decreases from 45.9% in 2008 to 43.2% in 2013, as well overall current cigarette smokers from 14.3% in 2008 to 12.7% in 2013, both boys and girls. In compare with recently performed regional surveys,

Smoking status	2008			2013		
	Overall	Boys	Girls	Overall	Boys	Girls
Ever cigarette smokers	45.9%	52.9%	39.0%	43.2%	47.8%	38.3%
95% CI	(41.5–50.4)	(48.7–57.0)	(33.6–44.7)	(39.2–47.4)	(43.3–52.3)	(34.1–42.6)
Current cigarette smokers	14.3%	17.6%	11.3%	12.7%	15.5%	9.7%
95% CI	(11.5–17.8)	(14.6–21.0)	(7.9–15.8)	(10.6–15.2)	(12.4–19.2)	(7.5–12.4)

Table 1. Tobacco use in school children age 13-15, the Federation of Bosnia and Herzegovina 2008-2013

Cessation status	2008			2013		
	Overall	Boys	Girls	Overall	Boys	Girls
Tried to stop smoking in the past 12 months	68.1%	66.4%	70.6%	57.7%	57.8%	56.8%
95% CI	(64.5–71.4)	(61.3–71.3)	(63.7–76.7)	(50.8–64.3)	(47.5–67.4)	(48.7–64.5)
Want to stop smoking now	50.5%	54.4%	46.1%	45.8%	44.8%	46.3%
95% CI	(45.4–55.6)	(48.1–60.6)	(39.3–53.0)	(40.5–51.2)	(36.9–52.9)	(38.8–54.0)
Thought they would be able to stop smoking if they wanted to	53.2%	60.1%	38.5%	80.3%	80.1%	80.8%
95% CI	(43.3–62.9)	(45.2–73.9)	(26.3–52.3)	(75.8–84.4)	(73.2–85.5)	(72.9–86.8)
Have ever received help/advice from a program or professional to stop smoking	NA	NA	NA	12.3%	12.7%	11.7%
95% CI				(9.3–16.0)	(9.0–17.6)	(8.2–16.6)

Table 2. Smoking cessation in school children age 13-15, the Federation of Bosnia and Herzegovina 2008-2013

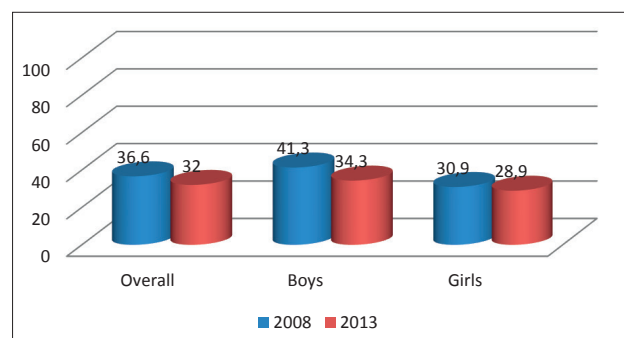


Figure 1. Ever smokers initiated smoking before age of ten, the Federation of Bosnia and Herzegovina 2008-2013

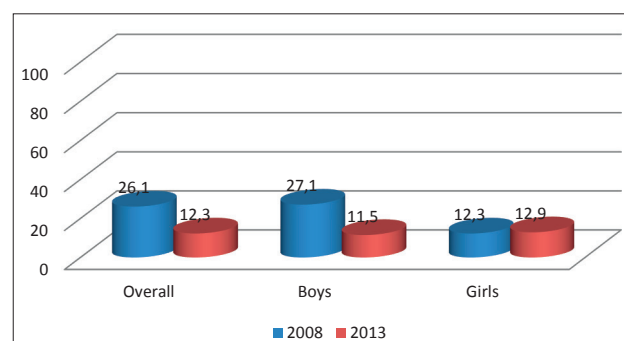


Figure 2. Never tobacco users susceptible to tobacco use in the future, the Federation of Bosnia and Herzegovina 2008-2013

current cigarette smokers in the Federation of BiH data from is lower in compare to Croatia (27.2%), Slovenia (17.8%), Hungary (23.2%), Czech Republic (30.6%) and higher compare to current cigarette smokers among school children in Serbia (9.3%), Montenegro (5.1%) and Italy (7.3%) (11,12,13).

A survey data indicate early initiation of smoking among school children in the Federation of BiH, from 36.6% in 2008 who initiated to smoke in age before ten, decreases to 32.8% in 2013 which is similar to survey data in Serbia (36.8%) and Montenegro (39.6%) and higher compare to surveys performed in Croatia (23.3%), Slovenia (19.6%) Czech Republic (21.4%), Hungary (18.0%) and Italy (7.4%) (11,12,13).

A survey finding indicates evidence of decrease of attempting to stop smoking among school children in the Federation of BiH, from 68.1% in 2008 to 57.7% in 2013, which is lower in line with trends of cross-country surveys and data of attempting to stop smoking in Croatia (65.3%), Serbia (52.5%), Montenegro (75.6%), Slovenia (61.6%), Italy (66.2%), Hungary (66.3%) and Czech Republic (70.3%) (11,12,13).

Also, a survey data shows decrease of current smoking students who want to stop smoking now from 50.5% in 2008 to 45.8% in 2013, which is higher compare to surveys results in Croatia (36.2%), Slovenia (33.2%), Montenegro (41.2%), Italy (28.0%), Hungary (41.0%), and Czech Republic (44.9%) and lower compare to Serbia (47.5%) (11,12,13).

It is significant that only of 12.3% school children in 2013 have ever received help/advice from a program or professional to stop smoking, which is significantly lower compare to surveys results in Croatia (51.3%), Serbia (81.2%), Slovenia (43.1%), Montenegro (65.0%), Italy (57.3%), Hungary (48.1%), Czech Republic (46.1%) (11,12,13).

6. CONCLUSION

A survey findings indicates that almost half of school children ever smoked cigarettes more likely boys than girls as well almost a third of school children confirmed to start smoking in age before ten, as a sign of early initiation and evidence of significant nicotine addiction. However, collected data confirmed decreases of current cigarette smoking in school children in the Federation of BiH during period 2008-2013, both in boys and girls which is an indicator for further enforcement of initiated tobacco control measures.

For prevention and decrease of smoking among school children it is very important to provide available cessation services and quit lines. Particularly as survey data shows that current cigarette smokers among school children who tried to stop smoking in past year as well those who want to stop smoking now decreases in period 2008–2013. In line with good international practice of youth cessation services, more efforts should be focus to promote awareness and knowledge of school children related to smoking cessation there is need for more comprehensive public campaigns as well enforcement of friendly use quitting services and help lines developed in collaboration of health and education system in the Federation of BiH (14,15,16,17,18,19)

CONFLICT OF INTEREST: NONE DECLARED.

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